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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,363	01/29/2004	Khosro Shamsaifar	WJT08-0056 (JSF001-0005)	4885

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EXAMINER	
NGUYEN, THUAN T	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
05/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,363	SHAMSAIFAR, KHOSRO	
	Examiner	Art Unit	
	THUAN T. NGUYEN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22-24* is/are allowed.

6)☒ Claim(s) *1,2,9-13,16 and 18-21* is/are rejected.

7)☒ Claim(s) *3-8,14,15 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless --*
> *(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.*

2. Claims 1-2, 9-13, 16, 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamogawa et al.(U.S. Patent No. 6,384,785 B1).

Regarding claim 1 and 12, Kamogawa teaches "an electronically tunable multiple band antenna, comprising: a high band antenna with at least one tunable element associated therewith, said high band antenna providing a first input to a controller; a low band antenna with at least one tunable element associated therewith, said low band antenna providing a second input to said controller; and said controller further receiving control data and controlling a first bias for biasing said at least one tunable element associated with said high band antenna and a second bias for biasing said at least one tunable element associated with said low band antenna" (see Figs. 18A & 18B and col. 3/lines 22-32).

As for claim 2, Kamogawa further teaches "comprising a DC voltage supply provided to said controller" (col. 12/lines 26-38 as DC power is addressed).

As for claim 9, wherein said multiple band antenna is a quad band antenna.

For claim 10, Kamogawa teaches "wherein said control data is information to enable tuning for reception and transmission of predetermined frequency bands" (col. 5/lines 40-53).

For claim 11, Kamogawa inherently suggests "wherein said quad band antenna covers the following frequency bands and standards: 824 - 894 MHz; 880 - 960 MHz; 1710 -1880 MHz; 1850 -1990Hz; GSM850; EGSM; GSM 1800; and PCS 1900" (col. 5/lines 40-53).

For claims 13, 16, 18-21, please refer to the claims above.

Allowable Subject Matter

3. Claims 3-8, 14-15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach the electronically tunable multiple band antenna as of claim 1, AND further including the steps of "wherein said high band antenna further comprises: a substrate; a patch element on said substrate; at least one voltage tunable varactor associated with said patch element; a DC bias point on said patch element; and an RF input on said patch element" as called for in claims 3, 6, 14, and 17.

5. Claims 22-24 have been allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest an electronically tunable quad-band antenna, comprising: a tunable high band antenna tuned by at least one tunable varactor associated therewith; said tunable high band antenna further comprising:

a substrate; patch element; a patch element on said substrate; at least one voltage tunable varactor associated with said a DC bias point on said patch element; an RF input on said patch element; and a temperature sensor associated with said high band pass antenna; a tunable low band antenna tuned by at least one tunable varactor associated therewith said tunable low band antenna further comprising: a substrate; a patch element on said substrate; at least one voltage tunable varactor associated with said patch element; a DC bias point on said patch element; an RF input on said patch element; and a temperature sensor associated with said low band pass antenna; a controller receiving control data, output information from said low band antenna and output information from said high band antenna and controlling a first bias voltage for biasing said at least one voltage tunable varactor associated with said high band antenna and a second bias voltage for biasing said at least one voltage tunable varactor associated with said low band antenna.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Suzuki and Ying (in PTO 892 attached) disclose systems related to quad band antennas and techniques.

8. **Any response to this action should be mailed to:**
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to the New Central Fax number:
(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tony T. Nguyen
Primary Examiner
Art Unit 2618

TTN
April 27, 2007